

CLAIMS

1. An optical scanning-type touch panel comprising: an optical scanning unit for angularly scanning light in a plane substantially parallel to a predetermined region; a deflecting unit for deflecting scanning light of said optical scanning unit; and a light receiving unit for receiving the deflected scanning light, for detecting a scanning light cut-off position, which is produced in said predetermined region by an indicator, based on a light receiving output of said light receiving unit that corresponds to a scanning angle, said optical scanning-type touch panel being characterized in that said deflecting unit has an asymmetrical shape about an optical axis.

2. The optical scanning-type touch panel as set forth in claim 1,

wherein the shape of said deflecting unit is asymmetrical in a scanning direction.

3. The optical scanning-type touch panel as set forth in claim 1,

wherein the shape of said deflecting unit is asymmetrical in a height direction.

4. The optical scanning-type touch panel as set forth in claim 3,

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wherein a height of said deflecting unit is substantially equal to a height of said optical scanning unit.

5. The optical scanning-type touch panel as set forth in claim 4,

wherein said predetermined region has a rectangular shape, and a width of said deflecting unit is substantially equal to a scanning surface opening width of said optical scanning unit in scanning a diagonal section of said predetermined region with light.

6. An optical scanning-type touch panel comprising: an optical scanning unit for angularly scanning light in a plane substantially parallel to a predetermined region; a deflecting unit for deflecting scanning light of said optical scanning unit; and a light receiving unit for receiving the deflected scanning light, for detecting a scanning light cut-off position, which is produced in said predetermined region by an indicator, based on a light receiving output of said light receiving unit that corresponds to a scanning angle, said optical scanning-type touch panel being characterized by satisfying a condition

$$d/2+w < D\tan\delta$$

where D is a distance from said optical scanning unit to said deflecting unit, w is a width on said deflecting unit from a path of said scanning light to an end on said predetermined region side, d is a beam width of said scanning light, and δ is a scanning start angle.

7. An optical scanning-type touch panel comprising: a light retro-reflector provided outside a predetermined region; an optical scanning unit for angularly scanning light in a plane substantially parallel to said predetermined region; and a light receiving unit for receiving reflected light of scanning light of said optical scanning unit from said light retro-reflector, for detecting a scanning light cut-off position, which is produced in said predetermined region by an indicator, based on a light receiving output of said light receiving unit that corresponds to a scanning angle, said optical scanning-type touch panel being characterized in that said optical scanning unit is provided with a protective film having a maximum reflectance at an angle of incidence corresponding to a scanning angle at which a quantity of said reflected light is minimum.

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